Environmental Operations, Inc.
CLEARING THE WAY

August 17, 2010

Mr. Bruce Morrison
Project Manager
U.S. Environmental Protection Agency, Region 7
ART Division / RCRA Corrective Action
901 North 5th Street
Kansas City, Kansas 66101-2907

RE: Work Plan for Baseline Groundwater Monitoring
Comment Letter Dated July 19, 2010
Solutia – John F. Queeny Plant
St. Louis, Missouri
EPA ID No. MOD 004 954 111

Dear Mr. Morrison:

Environmental Operations, Inc. (EOI), on behalf of SWH Investments, is providing this response to the letter referenced above. Note that the development of the list of wells for the Baseline Groundwater Monitoring (BGM) Plan had been accomplished via discussion and input from EPA and MDNR to facilitate a reasonable network. The BGM network is comprehensive, with wells in the fill and silty clay unit, the sand unit, and locally bedrock. They were selected to provide information on background, plume source area, plume stability, and natural attenuation. Below are the comments verbatim from the U.S. Environmental Protection Agency (EPA) Region VII and the Missouri Department of Natural Resources (MDNR) from the referenced letter, followed by our response.

1. *Two wells should be installed in the north portion of the Quarry Area, with one of those wells completed to bedrock where the bedrock elevation is less than 340 feet (MSL). Figure 2-6 should be revised to show the correct bedrock elevations at the south end of the quarry. Monitoring well MW-11A should be included in the baseline sampling.*

   Response: We don't understand the request for installing or adding wells in the Quarry area, which is not an area of concern. Seven plan wells, MW-4, 5, 11B, 15, 19, and 23, are located in down gradient locations from the former Acetanilides Production Area (APA). These wells provide a reasonable distribution for monitoring the former APA for both effectiveness of the Interim Measures and plume stability.

One data point from the south end of the quarry area indicates that depth to bedrock locally is lower than 360 MSL. The figure can be revised to reflect data that apparently post-dates the original source for this figure.

2. *Two sand zone wells should be installed in the former FF Building Area to determine if contaminants in the area have migrated vertically. One sand zone well should be installed in the vicinity of LPZ-5 and the other should be installed near REC-4.*

   Response: The sand zone is being monitored in down gradient locations (MW-28B, MW-30B, MW-36B, and MW-38B) to evaluate the plume. The existing data did not indicate the need to further characterize vertical migration in the source area, was not an element of the Interim Measures, and is not necessary for the BGM Plan. Indicator wells to be installed during the Interim Measures will also provide information on the remedial progress in the FF Building Area.

3. *GM-3 should be included in the baseline monitoring as it will provide additional data for contaminant trend analysis at the former Acetanilides Production Area.*

   Response: The presence of GM-1 and GM-2 in the source area are sufficient to evaluate contaminant trends; sampling an additional well is not necessary. In addition, indicator wells installed for the Interim Measures in the former APA will also provide data on contaminant trend.

4. *MW-9, MW-10, MW-13, MW-26, and MW-27 should be included in the baseline monitoring to confirm that contamination has not migrated down gradient of the source area.*

   Response: Down gradient wells were selected and are included in the plan for the former APA. Given the historic data, the site-specific constituents, and groundwater flow, the additional wells are not warranted. Note that the plan has a provision to evaluate the network based on data and make adjustments if warranted.

5. *VW-2B is a sand zone well located immediately down gradient of the source area in the FBCSA and has historical contaminant trend data. This well should be included in the groundwater sampling plan to monitor down gradient extent and further analyze the contaminant trend within FBCSA.*

   Response: Although the sand zone is being monitored via wells MW-31B, 32B, 33B, and 34B, VW-2B would be reasonable to add to monitor the plume nearer the source. VW-2B will be added to the network.

6. *Page 20, third paragraph: Wells should not be pumped dry and 25% drawdown*

should also be avoided. Ideally, drawdown should be minimal to non-existent.

Low flow purging and sampling techniques should be employed that will allow for the most representative samples to be collected.

Response: The intent, ideally, should be minimal to non-existent drawdown, which assumes adequate recharge is occurring. The text was addressing the condition of inadequate recharge, and recourse for that condition. We concur in principal with the comment, and will revise the text to add clarity to distinguish between the ideal site conditions and the potential for non-ideal.

7. *Page 20, fourth paragraph: A sample collection pumping rate of 0.5 liters per minute during sampling may be too fast, and samples should be collected at the lowest flow rate possible.*

   Response: The text indicated an upper limit rate, not the preferred rate. We concur and will revise text for clarity. Field implementation will be to collect samples at the lowest flow rate practicable.

8. *Page 20-21: VOA vials cannot be collected with air bubbles in them, as they will not provide representative data.*

   Response: We agree with the comment. We described an approach that was intended to produce samples without air bubbles. However, should several unsuccessful attempts to obtain a bubble-free sample occur, including using a new vial, we can either not collect a sample, or submit one noting the limitations of the analytical data. We think the latter approach provides some data, even if qualified, rather than none. We can revise the text to add clarification.

9. *Field documentation should include draw downs and pump rates.*

   Response: We concur, and the sampling logs will record these data.

10. *Page 25, Annual Reporting: Analytical results should be compared to appropriate standards such as Regional Screening Table values or Missouri Water Quality Standards. The Annual Report should evaluate the effectiveness of the groundwater monitoring network at measuring the extent of the contaminant plume and whether additional wells and monitoring are needed to make this determination.*

    Response: The section cited on Page 25 (Annual Reporting) states that plume stability will be evaluated. It also states the network will be evaluated and recommendations provided for modifying the network, parameters, and frequency of sampling and analyses. This will include evaluation of the effectiveness of the groundwater monitoring network at measuring the extent of contaminate plumes

and whether additional wells and monitoring are needed. Analytical results will be compared to appropriate screening standards. Note that the approved Interim Measures was designed to facilitate redevelopment of the property and reflects the discussions between EOI and EPA. The final cleanup of groundwater will be addressed through alternative concentrations limits established through EPA Technical Impracticability Guidance.

If there are questions or concerns related to this letter please contact Matt Robinson or Larry Rosen who can be reached by phone at (314) 241-0900, or via email at matt@environmentalops.com or larryr@environmentalops.com.

Respectfully submitted,

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